

REMARKS/ARGUMENTS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 4-6, 10-12, 16 and 32-53 are presently pending in this application, Claims 4, 10, 16, 33, 36, 41 and 45 having been amended, and Claims 47-53 having been newly added by the present amendment. Support for the amendments and addition in the claims can be found in the original application, for example, the specification, page 18, line 7 to page 19, line 10. Thus, no new matter is believed to be added. If, however, the Examiner disagrees, the Examiner is invited to telephone the undersigned who will be happy to work in a joint effort to derive mutually satisfactory claim language.

In the outstanding Office Action, Claims 4-6 and 34 were rejected under 35 U.S.C. §102(b) over Harada et al. (WO 2001/051173, WO '173) (corresponding to US 2002/0197193); Claims 10, 16, 37-39 and 46 were rejected under 35 U.S.C. §103(a) over Harada et al. in view of Yamamura et al. (JP 2002-102709); Claims 32 and 33 were rejected under 35 U.S.C. §103(a) over Harada et al. in view of Veres (US 3,929,494); Claims 35, 36, 40, 41, 44 and 45 were rejected under 35 U.S.C. §103(a) over Harada et al. and Yamamura et al. in view of Veres; and Claims 11, 12, 42 and 43 were rejected under 35 U.S.C. §103(a) over Harada et al. in view of Yamamura et al.

Claim 4 is directed to a honeycomb filter for purifying exhaust gases, and it recites, among others, "an adhesive layer combining said columnar porous ceramic members with one another and formed by drying an adhesive paste including a pore forming material which forms a plurality of pores adjusting a thermal capacity per unit volume of said adhesive layer, the adhesive paste including the pore forming material in an amount such that said thermal capacity per unit volume of said adhesive layer becomes lower than a thermal capacity per unit volume of the porous ceramic members, wherein the pore forming material comprises at

least one of a balloon and a thermally decomposable resin material.” The honeycomb filter of Claim 4 has such an adhesive layer and thus achieves a lower thermal capacity, which allows the honeycomb filter to be heated more quickly.

Harada et al. describes a honeycomb structure, but fails to teach “an adhesive layer combining said columnar porous ceramic members with one another and formed by drying an adhesive paste including a pore forming material which forms a plurality of pores adjusting a thermal capacity per unit volume of said adhesive layer, the adhesive paste including the pore forming material in an amount such that said thermal capacity per unit volume of said adhesive layer becomes lower than a thermal capacity per unit volume of the porous ceramic members, wherein the pore forming material comprises at least one of a balloon and a thermally decomposable resin material” as recited in Claim 4. Harada et al. simply states that the adhesive layer may include heat-resistant ceramic fiber, ceramic powder, cement, etc. (see WO ‘173, page 7, third paragraph), and does not discuss adding these materials to the adhesive layer in such an amount as to obtain a desirable thermal capacity. Also, regarding these inorganic materials listed in Harada et al., Applicants have shown in Comparative Examples 3 and 4 that the adhesive paste containing ceramic fiber (inorganic fiber), silica sol (inorganic binder), silicon carbide powder (inorganic particle), and/or carboxymethyl cellulose (organic binder) tends to have a larger thermal capacity as compared with the adhesive paste materials of Examples 10-18 (see Tables 4-6) where the thermal capacity is lower due to the pore formation. These materials are thus simply examples of additives that can be included in the adhesive paste in addition to a pore forming material (see the specification, page 24, lines 24-28).

On the other hand, the adhesive layer provided in the honeycomb filter of Claim 4 is formed by drying an adhesive paste including a pore forming material. When the pore forming material includes a resin material, it can function as, for example, a capsule holding

gas inside and is decomposed upon heating, thereby releasing the gas and forming pores.

When the pore forming material includes balloons, the hollow spaces inside the balloons become the pores in the adhesive layer. Harada et al. does not describe such a resin material or a balloon. Therefore, the subject matter recited in Claim 4 is believed to be distinguishable from Harada et al.

Yamamura et al. and Veres are both related to sealing materials, but fail to teach the adhesive layer as recited in Claim 4. Yamamura et al. is simply cited for its reference to a sealing material containing inorganic fiber, inorganic binder, organic binder, and inorganic particles (paragraph 0015) and does not describe an adhesive paste including a pore forming material comprised of a balloon and/or a thermally decomposable resin material. Veres describes a sealing material including a glass frit, ZnO powder and SiC powder, and does not discuss heat capacity difference between the adhesive layer and the porous ceramic members. Therefore, the subject matter recited in Claim 4 is believed to be distinguishable from Yamamura et al. and Veres as well.

Because none of Harada et al., Yamamura et al. and Veres discloses the adhesive layer as recited in Claim 4, even the combined teachings of these cited references are not believed to render the subject matter of Claim 4 obvious.

Turning to Claim 10, Claim 10 is directed to a honeycomb filter for purifying exhaust gases, and it recites “a coating material layer formed on a circumferential face of said ceramic block and formed by drying a coating material paste including a pore forming material which forms a plurality of pores adjusting a thermal capacity per unit volume of said coating material layer, the coating material paste including the pore forming material in an amount such that said thermal capacity per unit volume of said coating material layer becomes lower than a thermal capacity per unit volume of the porous ceramic member, wherein the pore forming material comprises at least one of a balloon and a thermally decomposable resin

material.” As discussed above, none of the cited references teaches the coating material layer having such thermal capacity controlled by the introduction of a pore forming material.

Therefore, Claim 10 is believed to be distinguishable from Harada et al., Yamamura et al. and Veres.

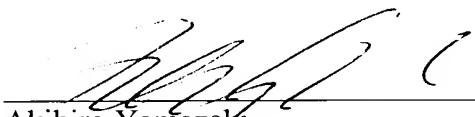
Likewise, independent Claim 16 includes subject matter substantially similar to what is recited in Claims 4 and 10 to the extent discussed above. Thus, Claim 16 is also distinguishable from Harada et al., Yamamura et al. and Veres.

For the foregoing reasons, Claims 4, 10 and 16 are believed to be allowable. Furthermore, since Claims 5, 6, 11, 12 and 32-53 depend directly or indirectly from either Claim 4, 10 or 16, substantially the same arguments set forth above also apply to these dependent claims. Hence, Claims 5, 6, 11, 12 and 32-53 are believed to be allowable as well.

In view of the amendments and discussions presented above, Applicants respectfully submit that the present application is in condition for allowance, and an early action favorable to that effect is earnestly solicited.

Respectfully submitted,

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